



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

March 19, 1982

MEMORANDUM FOR: Chairman Palladino

FROM: William J. Dircks
Executive Director for Operations

SUBJECT: SUMMARY OF MEETING HELD AT USGS

On March 1, 1982, Harold Denton, Jim Knight and I met with Dallas Peck, Director, U.S. Geological Survey (USGS) and members of his staff. I requested this meeting in a letter of December 14, 1981 to Dr. Peck for the purpose of discussing the continuing need for review assistance from the USGS and to assure continued coordination of review schedules necessary to meet plant licensing requirements. A list of attendees is attached.

The interaction between NRC and USGS continues to be effective. Conduct of a comprehensive safety review requires input from USGS research in both specific site and regional matters as well as topical issues such as earthquake hazard estimation. Close coordination between the USGS and NRC staffs assure that pertinent information flowing from USGS research programs is brought into NRC safety evaluations in a timely fashion. The particularly rapid development of information in the area of strong ground motion that has occurred in the past few years has made this coordination all the more necessary.

Better understanding of the geologic basis for certain eastern seismic events such as the New Madrid and Charleston earthquake has been gained through USGS research. The geological process occurring in the New Madrid region is now considered to be well understood. We spent considerable time on the Charleston issue. The geologic features related to the Charleston, South Carolina event under current hypothesis may not be unique to the Charleston area. The cumulative displacements over geologic time are small on these features. In light of today's knowledge, it may not be appropriate to fix a single location for the Charleston event but to express the probability, albeit low, of such an earthquake occurring anywhere in a large region. Probabilistic characterizations may also be more appropriate for some western sites of complex geology such as the Hanford, Washington area. The USGS and NRC staffs will work closely on these developments to assure effective communication.

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Other parts of interest resulting from the meeting included:

- A briefing on the proposed safety goals for nuclear power plants would be useful as one means of assisting communication between the USGS and NRC staffs with regard to the evaluation and use of probabilistic methods in seismic hazard and safety evaluation. This briefing will be arranged at the earliest opportunity.
- Probabilistic characterization of seismic activity may appear to conflict with the approach of Appendix A to 10 CFR 100. The need for revision of Appendix A is well recognized and is planned to start when NRC staff resources are available. USGS assistance in this effort will help assure the application of best available technology.
- The use of peak "g" values is inappropriate for setting design seismic input because there is little, if any, correlation to damage. Cooperative efforts between USGS, NRC and the National Science Foundation in the field of engineering seismology are desirable and could lead to the development of appropriate conservative yet rational design input parameters.
- Continued NRC support for the state geologic agencies is desirable, particularly in light of reductions in the USGS budget for funding seismic instrument networks. Seismic networks in the region of several operating plants have provided the information necessary for timely and accurate interpretation of actual ground motion by both the NRC staff and the state agencies during recent small earthquakes.

Finally, Dr. Peck and Jim Devine stressed a point that they wished us to bring to the ASLB Panel's attention. The duration and scope of the NRC hearing process often makes USGS planning for NRC assistance difficult. In some cases, the Hearing Boards have been issuing subpoenas directly to individual USGS staff members. These individuals, many times, have been pursuing research that is on the fringes of generally accepted geologic or seismic science and do not represent USGS position. Dr. Peck emphasized that the Boards should attempt to use proper channels and procedures when seeking USGS views. He recognizes and respects the right of intervenors to seek out and subpoena USGS individuals to support a particular position

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staked out in a case but he felt that if the Boards wanted official USGS positions, they should use accepted channels that exist through the Director's office. I have discussed this with Tony Cotter and provided him with the contact point at USGS.

(Signed) William J. Dircks

William J. Dircks
Executive Director
for Operations

Enclosure
List of attendees

CC: Commissioner Gilinsky
Commissioner Ahearne
Commissioner Roberts
- SECY
OGC
OPE
HRDenton/NRR
BPCotter/ASLBP
RBMinogue/RES

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| OFFICE | EDO | | | | | | |
| SURNAME | WJDircks/sms | | | | | | |
| DATE | 3/19/82 | | | | | | |

ATTENDEES

NRC/USGS MEETING - MARCH 1, 1982

NRC

W. Dircks, Executive Director for Operations
H. Denton, Director, Office of Nuclear Reactor Regulation
J. Knight, Assistant Director for Components & Structures Engineering

USGS

D. Peck, Director, USGS
D. Frederick, Associate Director, USGS
J. Devine, Assistant Director for Engineering Geology
R. Hamilton, Chief Geologist